

What is claimed is:

- Sub A5*
1. A liquid crystal display device comprising:
a liquid crystal panel having a plurality of scanning lines/
and a plurality of signal lines;
 - 5 a standard voltage generating circuit providing a plurality/
of standard voltages;
 - a vertical driver that scans the scanning lines of said +
liquid crystal panel one after another;
 - a horizontal driver that receives the plurality of standard
10 voltages provided from said standard voltage generating circuit
and supply gradation voltage to the signal lines of said liquid
crystal panel; and
 - a control circuit that creates gradation data by inverting
a polarity of input data for each horizontal synchronization
15 cycle and controls the horizontal drivers so as to apply standard
voltage corresponding to said gradation data to the liquid
crystal panel;
 - wherein a gradation- γ correction voltage relation used by
said control circuit for gradation display is symmetrical with
20 respect to a point in a center between a top gradation step and a
bottom gradation step.
 - 25 2. The liquid crystal display device according to claim 1,
wherein said gradation- γ correction voltage relation is
represented with a straight line and said horizontal drivers
apply γ correction voltage to said liquid crystal panel in
response to the input gradation data to meet the relation.
 3. The liquid crystal display device according to claim 1,
wherein said gradation- γ correction voltage relation is

represented with a non-straight line and said horizontal drivers apply γ correction voltage to said liquid crystal panel in response to the input gradation data to meet the relation.

4. The liquid crystal display device according to claim 3,
5 wherein said non-straight line is a curved line or a polygonal
line.

5. The liquid crystal display device according to claim 1,
wherein said input data is digital data and said control circuit
creates polarity-inverted gradation data by inverting each bit in
10 said digital data.

6. The liquid crystal display device according to claim 1,
wherein said standard voltage generating circuit has a ladder
resistance and said gradation- γ correction voltage relation is
determined by setting the resistance values of said ladder
15 resistance.

7. A driving method of a liquid crystal display device
comprising the steps of:

supplying a plurality of standard voltages to a horizontal
driver of a liquid crystal panel; and

20 scanning said liquid crystal panel with a vertical driver
by inverting a polarity of input data for each line for
displaying gradation;

wherein a gradation- γ correction voltage relation used in
displaying gradation is symmetrical with respect to a point in a
25 center between a top gradation step and a bottom gradation step.

8. The driving method of a liquid crystal display device
according to claim 7, wherein said gradation- γ correction voltage
relation is represented with a straight line and said horizontal

drivers apply γ correction voltage to said liquid crystal panel in response to the input gradation data to meet the relation.

9. The driving method of a liquid crystal display device according to claim 7, wherein said gradation- γ correction voltage relation is represented with a non-straight line and said horizontal drivers apply γ correction voltage to said liquid crystal panel in response to the input gradation data to meet the relation.

10. The driving method of a liquid crystal display device according to claim 9, wherein said non-straight line is a curved line or a polygonal line.